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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NOBUYUKI TAKAMORI,
HIDEHARU TAJIMA, and
AKIRA TAKAHASHI

Appeal 2008-2231
Application 10/002,949
Technology Center 1700

Decided: September 24, 2008

Before BRADLEY R. GARRIS, PETER F. KRATZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 10-22. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

Appellants claim an optical data recording medium having a protective film and a method of selecting a protective film in an optical data

recording medium. Specifically, each of the independent claims on appeal requires the protective film to have a linear expansion coefficient which is greater than 9.5 x 10^{-5} (1/°C) and smaller than 5.0 x 10^{-4} (1/°C). According to Appellants, this linear expansion coefficient characteristic reduces the warp angle or tilt of the medium to a range of ±5 mrad (Spec. para. bridging 18-19, para. bridging 22-23, 28:11-15).

Representative independent claim 10 reads as follows:

10. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate, and the linear expansion coefficient of the protective film is greater than 9.5 x 10^{-5} (1/°C) and smaller than 5.0 x 10^{-4}(1/°C).

The references set forth below are relied upon by the Examiner as evidence of unpatentability:

Tachibana	5,102,709	Apr. 7, 1992
Yoshioka	5,674,649	Oct. 7, 1997
Yokoyama	5,714,222	Feb. 3, 1998
Tajima	EP 1 031 972 A2	Aug, 30, 2000

Under 35 U.S.C. § 102(b), claims 10-16 are rejected as being anticipated by Yokoyama or Yoshioka or Tachibana.

Under 35 U.S.C. § 103(a): claims 10-17 and 22 are rejected as being unpatentable over Tachibana, and claims 10-22 are rejected as being unpatentable over Tajima.

For the reasons which follow, we will sustain the rejections based on Yoshioka, Tachibana, and Tajima but will not sustain the rejection based on Yokoyama.

The § 102 rejection based on Yokoyama

The Examiner's anticipation position is not based on express disclosure by Yokoyama that patentee's recording medium possesses the linear expansion coefficient and other characteristics required by claims 10-16. Instead, the Examiner finds that Yokoyama's medium would inherently possess these characteristics because the materials of construction correspond to those which may be used in constructing the claimed medium (Ans. 3-6, 10-12). Specifically, the Examiner finds that the epoxy acrylate protective films of Yokoyama's Examples 1 and 2 would inherently possess the linear expansion coefficients required by the rejected claims because Appellants disclose epoxy acrylate as an exemplificated construction material for the here-claimed protective film (*id.*).

When relying upon an inherency theory, an Examiner must provide a basis in fact and/or technical reasoning to reasonably support a determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1463-64 (BPAI 1990).

Here, the only support for the Examiner's inherency theory is Appellants' disclosure of epoxy acrylate as a possible construction material for the here-claimed protective film. Significantly, Appellants do not disclose that all epoxy acrylates are acceptable protective film materials. Rather, Appellants teach that the protective film must be made of a material which satisfies their linear expansion coefficient and Young's modulus

requirements (Spec. para. bridging 10-11). While epoxy acrylate is disclosed as an example of such material (*id.*), one with ordinary skill in this art would fully appreciate that an epoxy acrylate would be a suitable protective film material if and only if it possessed appropriate linear expansion coefficient and Young's modulus values. The deficiency of the Examiner's inherency position is further emphasized by Exhibit E of the Evidence Appendix for Appellants' Appeal Brief which indisputably shows that not all of the protective film materials disclosed in the paragraph bridging Specification pages 10-11 possess the linear expansion coefficient required by the rejected claims.

For these reasons, the Examiner's finding that Yokoyama inherently anticipates claims 10-16 is not reasonably supported by a basis in fact and/or technical reasoning. Therefore, we do not sustain the § 102 rejection of these claims as being anticipated by Yokoyama.

The § 102 rejections based on Yoshioka and Tachibana

These rejections also are based on an inherency theory which is premised, in part, on the Examiner's undisputed finding that corresponding materials of construction are used for the medium including the protective film of Yoshioka (Example 1), Tachibana (Examples 7-8) and claims 10-16 (Ans. 6-7, 12-14). Importantly, this inherency position is further supported by the Examiner's undisputed finding (id.) that the medium of Yoshioka and Tachibana possesses tilt or warp values (Yoshioka Example 1 at col. 8, ll. 39-41; Tachibana Table 1 at Examples 7-8) which fall within the ±5 mrad values taught by Appellants to be acceptable for the here-claimed medium (Spec. para. bridging 22-23, 28:11-15).

These undisputed findings of fact reasonably support the Examiner's determination that the medium of Yoshioka and Tachibana possesses the linear expansion coefficient and other characteristics required by the rejected claims. *See Ex parte Levy*, 17 USPQ2d at 1463-64. That is, it is reasonable to believe that the medium including the protective film of Yoshioka and Tachibana inherently possesses the linear expansion coefficient and other properties required by claims 10-16 since the prior art and claimed media are constructed of corresponding materials and exhibit corresponding warp or tilt characteristics.

Appellants' arguments concerning Yoshioka are unpersuasive because they fail to address the above-discussed fact that patentee's medium exhibits tilt or warp characteristics which are taught to be acceptable for the here-claimed medium. Concerning the Tachibana reference, Appellants state that "[t]he warp of exhibited [sic] by a particular recording medium is the result of a variety of factors, and the Examiner has not demonstrated that the observed warpage results of Tachibana are the result of, e.g., the substrate and protective film of Tachibana meeting the limitations of the present claims" (Br. 19). However, it is Appellants' not the Examiner's burden to make such a demonstration.

Where, as here, the claimed and prior art products appear to be identical, the Patent and Trademark Office can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977). The fairness of so allocating the burden of proof is evidenced by the inability of the Patent and Trademark Office to obtain and compare such products. *Id.*

Appellants also argue that Yoshioka and Tachibana contain no teaching of the expansion coefficient under humidity and Young's modulus features recited in claims 11-13. For the reasons discussed above, however, it is reasonable to believe that the medium of Yoshioka and Tachibana inherently possesses these features. *Levy,* 17 USPQ2d at 1463-64. On this record, Appellants have not carried their burden of showing otherwise. *Best,* 562 F.2d at 1255. Under the circumstances recounted above, we sustain the § 102 rejections of claims 10-16 as being anticipated by either Yoshioka or Tachibana.

The § 103 rejection based on Tachibana

In addition to the unsuccessful arguments discussed above concerning the Tachibana reference, Appellants argue that the rejection of product-by-process claim 22 is improper because this claim recites a protective film "selected by the method of any one of claims 18 to 21" and "[t]he Examiner has not even asserted that Tachibana anticipates or renders obvious any of claims 18 to 21 (as indeed it does not)" (Br. 20). This contention lacks perceptible merit.

Although claim 22 is a product-by-process claim, the patentability of this claim is based on the product itself, and the claimed product is unpatentable if it is the same as or obvious from a prior art product even though the prior art product was made by a different process. *Smithkline Beecham Corp. v. Apotex* Corp., 439 F.3d 1312, 1317-19 (Fed. Cir. 2006); *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985).

For the reasons analogous to those detailed previously, the recording medium product of claim 22 is indistinguishable from the recording medium

product of Tachibana. We sustain, therefore, the § 103 rejection of claims 10-17 and 22 as being unpatentable over Tachibana.

The § 103 rejection based on Tajima

Like Appellants, Tajima discloses an optical data recording medium having reduced warpage (Abstract, para. [0033]). Also like Appellants, Tajima achieves this goal by selecting appropriate Young's modulus and linear expansion coefficient values for the various medium layers particularly the protecting film wherein at least one of the Young's modulus and the linear expansion coefficient for the protecting film is larger than for the substrate (paras. [0036]-[0047]). In addition, Tajima (again like Appellants) prevents deformation of the recording medium caused by humidity change (para. [0056]).

Based on these findings of fact, the Examiner concludes that it would have been obvious for one with ordinary skill in this art to determine values for Young's modulus, linear expansion coefficient, and other properties of Tajima's recording medium including the protecting film which are effective for achieving the warpage reduction goal of Tajima, thereby resulting in Appellants' claimed property values including the linear expansion coefficients required by independent claims 10, 14, and 18 (Ans. 8-10, 15-16).

Appellants argue that "one of ordinary skill in the art would not have been motivated to make the modifications suggested by the Examiner [and] . . . would not have had a reasonable expectation of success" (Br. 23). We cannot agree.

As indicated above, an artisan would have been motivated to make the proposed modifications in order to achieve Tajima's warpage reduction goal. *See In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) (obvious to determine workable values for an art-recognized, result-effective variable). Furthermore, the artisan would have had a reasonable expectation that so modifying properties such as the Young's modulus and linear expansion coefficient of the protecting film would successfully achieve warpage reduction because Tajima expressly teaches warpage reduction is accomplished by manipulating these properties. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1364 (Fed. Cir. 2007) (the expectation of success need only be reasonable, not absolute).

Finally, Appellants argue without explanation that Tajima contains no teaching or suggestion of the features recited in dependent claims 11-13 and 19-21. This argument fails to persuade us of error on the Examiner's part in rejecting these claims.

The arguments concerning dependent claims 12, 13, and 19 are without merit. The features recited in these claims are expressly disclosed by Tajima (Table 3).

As for dependent claims 11, 20, and 21, we recognize that Tajima is silent regarding the expansion coefficient under humidity feature recited in these claims. As explained above, however, the goals of Tajima correspond to those of Appellants including the goals of reducing medium warpage as well as deformation caused by humidity. Further, like Appellants, Tajima achieves the warpage reduction goals by selecting materials for the medium including the protecting film which have linear expansion coefficients and other property values that reduce warpage. The commonalities shared by the

recording medium, particularly the protective film, claimed by Appellants and taught or suggested by Tajima reasonably support a determination that Tajima's protecting film inherently possesses an expansion coefficient under humidity corresponding to the values required by dependent claims 11, 20, and 21. *Levy*, 17 USPQ2d at 1463-64.

In summary, Appellants' arguments fail to establish error in the rejection under consideration. It follows that we sustain the § 103 rejection of claims 10-22 as being unpatentable over Tajima.

Conclusion

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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